Lab Assignment
& Solution



Cybersecurity Professional Program

Introduction to Python
for Security

# Functions

## PY-05-LS3
## Scope Behavior

**Note:** Solutions for the instructor are shown inside the green box.

## Lab Objective

Understand how the scope of a variable influences its behavior and how it can be manipulated.

## Lab Mission

Create global variables and try to make changes to them within a function.

## Lab Duration

10–20 minutes

## Requirements

- Basic knowledge of Python

## Resources

- Environment & Tools
    - Windows or Linux
        - PyCharm
        - Python 3

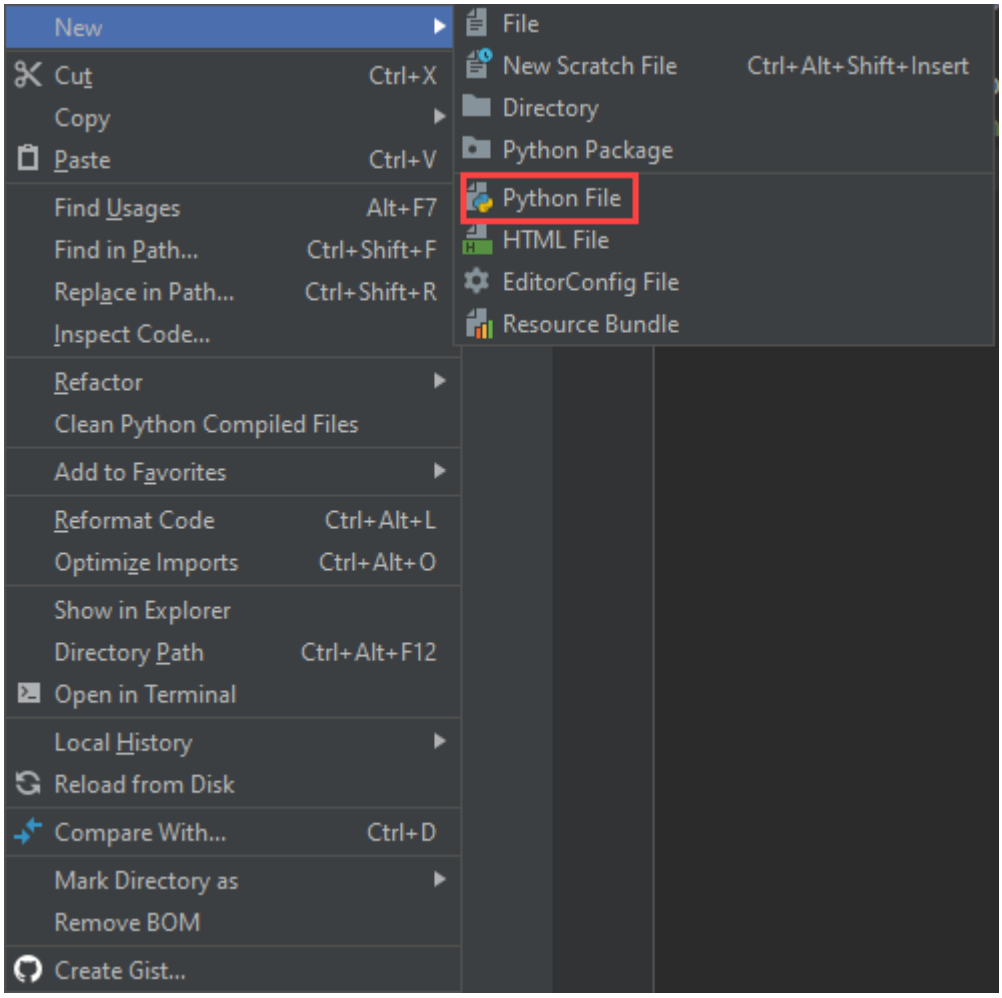
## Textbook References

- Chapter 5: Functions
    - Section 2: Code Handling

## Lab Task: Understanding Scope in Programing

In this task, you will learn how a global scope influences variables.

1 Create a new Python file in PyCharm by right-clicking the project you created and selecting **New** > ***Python File***.




2 Declare two different global variables.

```
global_var = 5
changed_global_var = 20
```

**3** Define a simple function.

```
def local_change():
```

**4** Within the function, change the value of the first variable and print it.

```
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
```

**5** Within the function, declare the second variable as global.

```
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
    global changed_global_var
```

**6** Within the function, change the value of the second variable and print it.

```
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
    global changed_global_var
    changed_global_var += 5
    print("inside function changed_global_var's value: ",
changed_global_var)
```

**7** Invoke the function.

```
local_change()
```

**8** Print the values of both functions after their invocation.

```
print("outside function global_var's value: ", global_var)
print("outside function changed_global_var's value: ",
changed_global_var)
```